LEVEL II

(14) BESRL—Research Study-69-10

(6) RESEARCH TO PREDICT CADET AND OFFICER PERFORMANCE,

(10) William H. Helme

(11) May 69 (12) 30

Army Behavioral Systems Research Lab

79 12 18 52

BESRL

U. S. Army
Behavioral Science Research Laboratory

402 797 gm

May 1969

BEHAVIORAL SCIENCE RESEARCH LABORATORY

An activity of the Chief, Research and Development

J. E. UHLANER
Director

JAMES E. WIRRICK
COL, GS
Commanding

NOTICES

DISTRIBUTION: Primary distribution of this report has been made by BESRL. Please address correspondence concerning distribution of reports to: U. S. Army Behavioral Science Research Laboratory, Attn: CRDBSRL, Room 239, Commonwealth Building, 1320 Wilson Blvd., Arlington, Virginia 22209.

FINAL DISPOSITION: This report may be destroyed when it is no longer needed. Please do not return it to the U. S. Army Behavioral Science Research Laboratory.

NOTE: The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

Army Project Number
2006106A722

Officer Prediction
Cadet Leaders

Research Study 69-10

RESEARCH TO PREDICT CADET AND OFFICER PERFORMANCE

William H. Helme

Submitted by:
William H. Helme
Chief, Behavioral Evaluation
Research Division

Approved by:
J. E. Uhlaner, Director
Behavioral Science
Research Laboratory

May 1969

Research Studies are special reports to military management. They are usually prepared to meet requests for research results bearing on specific management problems. Limited distribution is made primarily to the operating agencies directly involved.

FOREWORD

The research conducted by the Behavioral Science Research Laboratory under Area 1, "Personnel Management Research--Selection," included eight major work units. The present publication summarizes the human factors research on officer selection and evaluation performed under two of these work units:

Prediction of Officer Performance and Retention--OFFICER PREDICTION.
Psychological Measures for Use in Primary Officer Selection and Evaluation Programs--CADET LEADERS.

Research is conducted under Army RDT&E Project 2Q06106A722, "Selection and Behavioral Evaluation," FY 1969 Work Program. The remainder of BESRL's research effort in this area deals with selection and initial classification of enlisted manpower--screening, differential classification, and utilization of marginal manpower through optimum distribution of individual abilities (summarized in Research Study 69-5)--and with improving the selection of enlisted personnel for combat assignment.

J. E. UHLANER, Director
U. S. Army Behavioral Science
Research Laboratory

RESEARCH TO PREDICT CADET AND OFFICER PERFORMANCE

BRIEF

Requirement: THIS REPORT is about the

Development of instruments and procedures for the selection or early identification of potential officers and of individual assets relevant to effective performance of combat, technical, and administrative duties; application of the overall and differential measures developed in officer procurement and assignment programs--OCS, USMA, ROTC--so as to enhance the quality of performance and career motivation of the Army's officers.

Procedures:

Differential Officer Prediction. A wide range of experimental predictors, developed through an exhaustive sequence of research and administered to large samples of incoming officers, are subjected to empirical evaluation against 1) evaluations of first tour officer performance, 2) situational performance criteria obtained in a three-day exercise consisting of 15 different tasks typical of problems confronting officers in combat, technical, and administrative assignments (administered at the Officer Evaluation Center at Fort McClellan), and 3) performance ratings on those officers administered the experimental battery at entry into service who were on active duty in Vietnam, Korea, Europe, Alaska, and CONUS in 1967 and early 1968.

Applications in Junior Officer Procurement and Assignment. Selection techniques and evaluative measures developed through the officer prediction experimentation will have their applications mainly in selection for the three major avenues for commissioning of junior officers. In coordination with the Deputy Chief of Staff for Personnel and the Office of Personnel Operations, products of the long-term research will be subjected to further research looking to standardization of selected measures and implementation within the officer personnel system.

Meantime, updated measures have been produced for the major officer selection programs, including a revised OCS selection battery and new forms for ROTC evaluation procedures for training and commissioning. In the OCS selection program, research emphasis is on the development and validation of a "whole-man" evaluation system capable of adaptation to variation in quotas and quality of applicants.

Expected Payoff From Officer Prediction Research:

Predictive Measures Developed	Applications of selection procedures in junior officer procurement and career development
Information and Aptitude Tests	Improved selection of officers most likely to succeed in Cadet Training Branch Basic Training
Special Information-Attitude Measures	Identification of officers who will, in job performance, demonstrate Drive Achievement Morale
General Personality-Leadership Measures	Identify officers likely to be leaders in the most demanding situations-- Combat Combat support Arduous physical environment

RESEARCH TO PREDICT CADET AND OFFICER PERFORMANCE

BACKGROUND

Prediction and evaluation of officer performance, from cadet training to career completion, have been a major concern of Army research in personnel management. Within this broad area, the U. S. Army Behavioral Science Research Laboratory (BESRL) conducts research which not only provides scientific instruments and techniques to identify individuals with good leadership potential for officer training, to select officers for commissioning, and to evaluate officer performance, but also yields findings relevant to basic questions of policy.

One such question, posed by the Office of the Deputy Chief of Staff for Personnel, was: To what extent is it feasible to modify the "generalist" concept of officer effectiveness and to introduce a greater degree of differential classification and assignment of officers throughout their careers?

This question, together with cadet and officer selection requirements--with special emphasis on selection for combat leadership--led to the establishment of two work units in BESRL's research program. Under the OFFICER PREDICTION Work Unit, a comprehensive longitudinal research effort spanning a decade of work is now near completion. Under the CADET LEADERS Work Unit, instruments and procedures for selection of cadets in all three officer procurement programs--the United States Military Academy, the Reserve Officers Training Corps, and the Officer Candidate Schools--have been updated to meet the Army's changing operational requirements. The CADET LEADERS Work Unit will devote major effort to research on the application of scientific selection techniques derived from OFFICER PREDICTION research to the operational officer personnel system.

DESIGN OF RESEARCH IN OFFICER PREDICTION

The basic research design was longitudinal. Experimental measures developed in a sequence of studies were obtained on officers immediately after their entry on active duty, and performance evaluations were obtained at subsequent points in the officers' careers. Two large samples were used. The first sample of about 6500 officers was given a three-day experimental test battery, the Differential Officer Leadership Battery (DOL) at entry on active duty in 1958-1959. About 18 months later, the officers were rated on actual performance in their current assignments by superiors and associates. The raters also estimated the officer's potential performance <u>in wartime</u> in each of three major areas of assignment: combat, technical, and administrative. Based on the ratings of actual performance, the DOL was revised and shortened to a two-day battery, the Differential Officer Battery (DOB). The estimates of wartime potential provided a preliminary index of differential performance.

In the second sample, approximately 4000 entering officers were administered the DOB from late 1961 to early 1964. Performance ratings were obtained on these officers after 12 to 18 months, as well as estimates of potential for the three areas of assignment. From this sample, 900 officers representative of nine branches of service were selected to attend a carefully controlled three-day exercise at the Officer Evaluation Center (OEC), which was operated expressly for the purpose at Fort McClellan, Alabama, from 1963 to 1965. The exercise was a simulated combat situation integrating 15 problems such as officers might encounter in the field. Combat, technical, and administrative duties were each represented in five of the 15 tasks set for the officers. A well-trained team of officer and enlisted participant-observers conducted the exercise and evaluated the performance of the 900 officers in detail under systematized recording and scoring procedures. Content of the predictor battery given experimentally to officers entering on active duty and of the problem simulations conducted at the Officer Evaluation Center have been reported in previous publications.[1] The final stage of the longitudinal research was accomplished in 1967 and early 1968, when a team of BESRL scientists obtained performance ratings on samples of the original 10,500 officers who were on active duty in Vietnam, Europe, Korea, Alaska, and CONUS. The complete design is shown in Figure 1.

ANALYSIS OF OFFICER PREDICTION DATA

Analysis of data obtained in the longitudinal study is being conducted in three phases:

Phase 1. The officers' responses on the experimental predictor battery (DOB) are analyzed to identify the psychological factors measured.

Phase 2. Data on details of officer performance obtained by systematic observation of the exercise at the OEC are analyzed to identify the dimensions of performance evaluated.

Phase 3. Analysis of relationships between the psychological factors in the predictor battery and the performance dimensions of the OEC exercise on the one hand, and between the psychological factors and the actual job performance ratings in the first tour and in the 1967-1968

---

[1] Willemin, L. P. Prediction of officer performance. BESRL Technical Research Report 1134. March 1964.
Willemin, L. P. Criterion aspects of Army research on the prediction of officer performance. BESRL Research Study 65-6. December 1965.

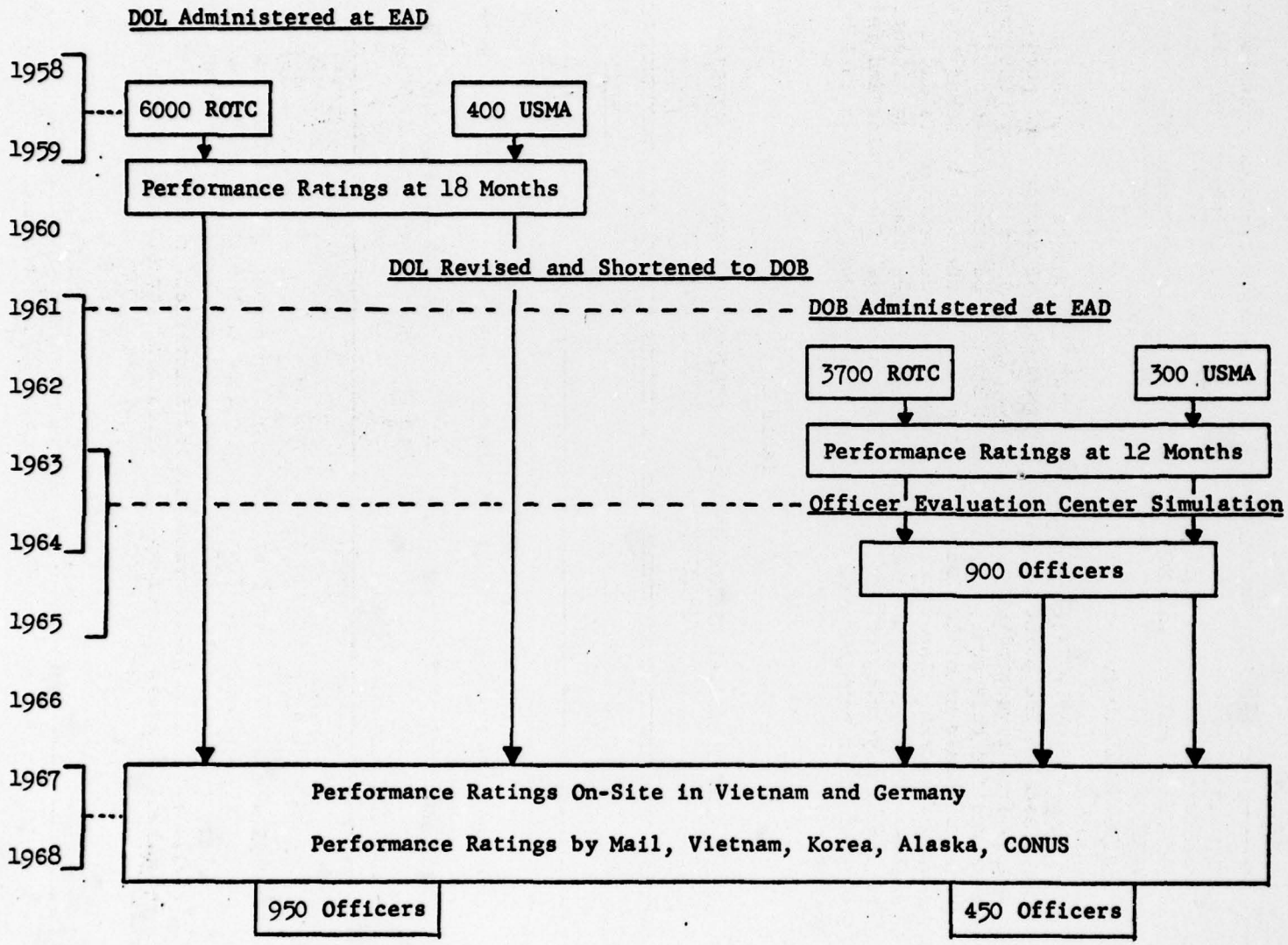

Figure 1. Design of longitudinal officer prediction research

follow-up is conducted.[2] On the basis of these interrelationships, the most useful instruments will be developed for use in selecting officers for combat, technical, and administrative duty.

RESULTS OBTAINED TO DATE

Analysis of Predictor Measures. The first phase of the analysis has progressed to the point of yielding psychological factors and predictor scales from five predictor instruments. The revised battery (DOB) was employed for this analysis, in which a stratified random sample of 900 cases was made up of 100 officers from each of the nine branches included in the research. The sections of the DOB analyzed so far yielded 100 scales with adequate internal consistency and reasonably clear identification of psychological characteristics measured. The scales and indication of their homogeneity, or internal consistency, are shown in Table 1.

Table 1

PSYCHOLOGICAL PREDICTOR SCALES DERIVED FROM FACTOR ANALYSIS OF DIFFERENTIAL OFFICER BATTERY

Type of Scale	No. of Scales	Length	Homogeneity	
			Mean	Range
Specific information	10	10-40 Items	.79	.64-.91
Other information scales	13	11-44 Items	.35	.22-.65
Self-description factors (A)	14	8-30 Items	.61	.26-.86
Self-description factors (B)	22	6-29 Items	.69	.41-.93
Speeded practical judgment	8	3-11 Items	.49	.35-.68
Group awareness	24	3-13 Items	.58	.45-.73
Individual understanding	9	4-12 Items	.62	.29-.82

These scales cover a broad range of personal characteristics with potential relevance to officer performance in the three broad domains of combat, technical, and administrative jobs. Table 2 lists the scales by titles reflecting the characteristics identified in the analyses and their hypothesized areas of relevance. Certain of the scales may be expected

[2] While not enough of the 900 officers who participated in the OEC evaluation exercise were still on duty in 1967 and 1968 to permit direct correlational analysis, the relationship of performance at the OEC and in Vietnam can be indirectly obtained through factors common to the predictor battery and the two criterion situations.

to relate to a single performance area--the warfare scale to the combat performance area, for instance--while others may relate to two or perhaps across all performance areas--decisive leadership or personal integrity, for example. Essentially, the finding from the internal analyses of predictor measures is that internally consistent measures of recognizable characteristics have emerged, and that these characteristics appear to have some degree of relevance to prediction of differential and overall officer performance. Whether this promise is fulfilled can be determined only when the predictor factors are analyzed in relation to the first tour, OEC exercise, and Vietnam and related performance criteria.

Table 2

PSYCHOLOGICAL SCALES WITH AREAS OF PERFORMANCE WHICH THEY ARE EXPECTED TO PREDICT

Scales	Areas of Performance		
	Combat	Technical	Administrative
INFORMATION TESTS			
Warfare	—		
Organized Sports	—		
Practical Skills	—		
Mathematics and Physical Science		—	
Biochemistry		—	
Intellectual Games		—	
Economics and Sociology			—
History and Politics			—
Literature and Art			—
Entertainment			—
Military Technology	—	—	
Finance		—	—
Supply		—	—
SELF-DESCRIPTION MEASURES			
Combat Command	—		
Outdoor Interest	—		
Sports	—		
Nature Endurance	—		
Physical Leadership	—		
Mechanical		—	
Scientific		—	
Electronics and Communications		—	
Abstract Reasoning		—	
Administrative Supervision			—
Concern for Order			—
Capacity for Detail			—

Table 2 (continued)

Scales	Areas of Performance		
	Combat	Technical	Administrative
SELF-DESCRIPTION MEASURES			
Artistic Interests			—
Combat Engineering	—	—	
Construction	—	—	
Manual Crafts	—	—	
Active Supervision		—	—
Military Intelligence		—	—
Verbal-Social Leadership		—	—
Decisive Leadership	—	—	—
Frustration Tolerance	—	—	—
Emotional Control	—	—	—
Achievement Drive	—	—	—
PRACTICAL JUDGMENT MEASURE			
Combat Discipline	—	—	
Command Responsibility	—	—	
Taut Ship	—	—	
Mediation		—	—
Considerateness		—	—
Buckpassing		—	—
Reluctant Leadership	—	—	—
Indecision	—	—	—
SELF-AND-GROUP AWARENESS MEASURES			
Combat Leadership	—		
Fighting Man's Code	—		
Mechanical		—	
Scientific		—	
Aesthetic-Intellectual			—
Concern for Order			—
Administration			—
Management Drive		—	—
Good Work Habits		—	—
Educated Sophistication		—	—
Healthy Self-Acceptance	—	—	—
Rigid Disciplinarian	—	—	—
Leader-Follower Relations	—	—	—
Cynicism	—	—	—
Marriage and Family Values	—	—	—
Personal Integrity	—	—	—
Range of Activities	—	—	—

Analysis of OEC Performance Measures. Analysis of performance data on the OEC tasks has progressed to the point of yielding reasonably clear factors--and scores on total task performance--on eight of the fifteen tasks (Table 3). Compared across different tasks, these factors can be classified into a limited number of categories. One major category is concerned with problem-solving activities, specifically with the technical quality of the solution: how well the office management plan prepared by the officer allocates personnel, distinguishes function, or provides for work flow; how effectively his highway traffic plan delivers needed supplies; how well the teams on a road damage and radiation survey are directed and the data integrated into a full situation-picture under his command; how well he directs artillery fire from an observation post and destroys an enemy missile.

Another category of performance factors deals with handling personnel interactions, another with alertness and coolness under fire, another with motivation and attitude. While the total scores depend heavily on the quality of problem solving exhibited, certainly the other factors brought out by the analysis also appear to reflect qualities of leadership which affect the motivation, confidence, and long-term effectiveness of the functioning unit and its personnel. Factors of behavior observed and recorded in the combat situation problems are listed by category in Table 4. While analysis of these complex and demanding combat tasks is not complete, there appears to be promise of identifying dimensions of performance significant to combat leadership.

Investigation of the reliability of performance ratings on OEC combat-type tasks revealed a highly satisfactory level of inter-rater agreement on the overall combat officer aptitude rating (Table 5). In the near future, the extent to which combat officer aptitude generalizes across the different OEC problems can be determined, as well as the specific measurable behavioral components of such a general ability.

Table 3

FACTORS DERIVED FROM EIGHT OEC SITUATIONAL TASKS

Task	Area of Performance	Problem-Solving Factors	Other Factors
Office Management	Admin	Identifying functions Allocating personnel Specifying flow process Introducing changes Correcting deficiencies	
Improper Supply Records	Admin	Correcting records	Influencing indigenous counterpart: Factual presentation, holding to objectives, maintaining personal relations
Site Selection for Depots	Admin	Quality of selection Justification	Briefing indigenous officer Motivation, method of attack
Highway Traffic	Admin	Effectiveness of delivery of tonnage Efficiency of routing	Specific directives: Designate depots, routes, restrictions, controls Motivation
Weapons Assessment	Tech	Identification of weapon Report weapon characteristics Report cartridge characteristics	Administrative effectiveness Motivation, attitude
Road Damage and Radiation Survey	Tech	Route control Handle team reports Operational problems Handle special incidents	Coolness and effectiveness Decisiveness Handle team relations
Observation Post	Combat	Responsibility under fire Direct artillery Destroy enemy missile	Alertness, reaction speed Motivation, attitude
March Order	Combat	Basic march order instructions Completeness of preparations	Handle personal interactions Motivation, attitude

Table 4

FACTORS DERIVED FROM SPECIFIC RECORDED ACTIONS IN THREE OEC COMBAT TASKS

Task	Factor Categories		
	Mission Oriented	Other Tactical	Command
Planning helicopter landing zone defense	Use of heavy weapons	On-site security Land navigation	Deployment, reconnaissance Assignment of personnel Handling ineffective NCO Debriefing report
Establishing roadblock	Training men in roadblock mission Terrain use Demolition placement	On-site security Capturing, handling enemy sniper Getting and reporting intelligence	Discipline on drinking creek water Handling men in roadblock activity
Mounted route reconnaissance patrol	Briefing NCOs on mission Getting and reporting intelligence Obtaining radiation reports	Behavior in contact with enemy	Handling NCOs in executing mission Taking initiative Reacting to problem situations Keeping CO informed Debriefing report

Table 5

COMBAT OFFICER APTITUDE RATINGS:
RELIABILITY ESTIMATES IN THREE SITUATIONAL TASKS

Task	N	Sample	Average Rater Intercorrelation	Reliability of Average Rating
Security mission	310	Combat	.68	.90 (4 raters)
	859	All cases	.71	.91 "
Route reconnaissance patrol	266	Combat	.84	.96 "
	732	All cases	.84	.95 "
Roadblock	707	All cases	.75	.90 (3 raters)

Analysis of Vietnam and other 1967-1968 Performance Ratings. The forms used for evaluation of officer performance in Vietnam in the 1967-1968 follow-up are reproduced in Appendixes A-1 and A-2. There was one form for all officers and in addition, a second form used also for those officers observed in actual combat. Ratings have been obtained on over 1400 officers, approximately half of those who were still on active duty when the 1967 follow-up began. Table 6 presents the breakdown by location, date of original testing, and occupational domain. About half the officers still on duty were found in Vietnam--the largest single group, numbering 362, were on combat duty there. The samples appear adequate for differential validation across the three domains and for analysis of the combat domain in particular.

Wherever possible, four raters evaluated each officer in the sample--the immediate supervisor, an alternate supervisor, and two associates. It was, of course, not possible in every case to find four raters who had sufficiently close and lasting observation to warrant acceptance of the rating. For the 1967 on-site Vietnam ratings, for example, the average number of raters was 3.62 for 439 cases: 309 with 4 raters, 93 with 3, and 37 with 2. Cases rated by only one rater were not accepted in the validation sample.

The reliability of ratings was investigated for the 309 Vietnam on-site cases with four raters. Table 7 demonstrates satisfactory inter-rater agreement with reliability coefficient of .77 for average rating. These findings confirm that the actual combat ratings made in Vietnam, like the combat aptitude ratings in the OEC simulation, have sufficient reliability to serve as criterion measures for validation of the selection measures and first-tour performance evaluations. Complete analysis of the interrelations of predictor and criterion measures is in progress.

Table 6

OFFICER PREDICTION DATA
(Summary of 1967-1968 Criterion Ratings)[a]

Location	Total Cases	Input Date		Area of Performance		
		1958	1962	Combat	Admin	Tech
Vietnam	692	420	272	362	243	87
Germany	135	95	40	49	52	34
CONUS	480	349	131	125	182	173
Other	110	79	31	36	38	36
TOTAL	1417	943	474	572	515	330

[a] On-site and mail ratings combined.

Table 7

ON-SITE VIETNAM RATINGS OBTAINED FOR OFFICER PREDICTION STUDIES

Rater	Mean	S.D.	Correlation			
			Immed Supv	Altn Supv	First Assoc	Second Assoc
Immediate Supervisor	5.93	1.11	---			
Alternate Supervisor	5.76	1.17	.61	---		
First Associate	5.81	1.09	.53	.45	---	
Second Associate	5.83	0.99	.39	.46	.42	---
				Reliability		
Average Overall Rating	5.83	0.85		.768		
Average Combat Rating[a]	6.03	0.89		.776		

[a] N = 83 Officers observed in combat.

CURRENT APPLICATIONS OF CADET LEADERS RESEARCH

As noted earlier, the CADET LEADERS Work Unit is concerned with prediction and evaluation of performance of cadets in the three major officer training programs--USMA, ROTC, and OCS. As the Officer Prediction research moves to completion of analysis and formulation of findings, recent and ongoing research in the Cadet Leaders area is providing some operational applications of earlier findings.

SELECTION FOR OCS

A new parallel form of the Officer Candidate Test, OCT-4, has been sent to press. It is expected to be in operational use by the beginning of FY 70. With its companion form, OCT-3, it constitutes the next hurdle to be passed by OCS applicants after qualifying with a score of 110 on the General Technical Aptitude Area (GT). The OCT qualifying score is 115, based on a population mean of 100 and standard deviation of 20. The OCT score is designed to assure that the applicant possesses the high degree of ability to learn required by cadet and later officer training. At present, the next hurdle is a score of 75 or better on the Officer Qualification Inventory (OQI), a non-cognitive measure of personal qualities relevant to leadership of men. A new research effort is now under way to provide a "whole-man" type of score combining OCT and OQI into a single index of officer potential.

SELECTION AND EVALUATION IN ROTC

In response to a requirement from the Directorate of ROTC/NDCC in USCONARC, an analysis was undertaken of the possibility of substituting CONARC Form 958, an evaluation of ROTC cadets in advanced summer camp, for the research-based Reserve Officer Evaluation Form (ROE). The first phase of this research consisted of a factor analysis of items on Form 958, the ROE executed at camp, and the ROE executed by the Professor of Military Science early in the final year of ROTC. While CONARC Form 958 is executed on all cadets in the camp, the ROE is applied only to tentative Distinguished Military Students (DMS) as part of their qualification for the offer of Regular Army commissions upon graduation. Thus, the factor analysis sample consisted of 400 cadets evaluated on the ROE, tentative DMS's of whom over 300 were Army scholarship recipients. Initial results of the analysis indicated that different factors were being evaluated in the Form 958 and in each of the two ROE's. These findings would make questionable the substitution of one form for the other. The evidence suggests that the 958 and summer camp ROE cover different aspects of evaluation, and that the situational difference between the two ROE's, one in camp and the other in the university course environment, is too great to warrant omission of either evaluation. The research will be pursued to obtain criterion measures--RA commissioning and ratings of performance as an officer in the branch basic course and later on-job ratings during the obligated tour of active duty. In this way, the more valid factors of the 958 and ROE can be identified and the better instruments retained. In the meantime, the factor analysis results can be used to shorten and simplify the evaluation forms. In a recent visit to the ROTC/NDCC Directorate, BESRL scientists reached an agreement to provide a draft form combining the 958 and the ROE in a single form to be administered to all cadets in the 1970 ROTC advanced summer camp, enabling the Army to eliminate designation of tentative DMS's prior to summer camp. The ROE would still be used to evaluate the DMS's for recommendation on the basis of performance in summer camp.

For the longer term, review of the whole system of selecting ROTC cadets for RA commissioning is under consideration, with BESRL scientists participating in a technical advisory capacity with the Directorate of Individual Training, DCSPER, DA, and the ROTC/NDCC Directorate, USCONARC.

PRODUCT APPRAISAL RESEARCH WITH THE USMA

In collaboration with the Office of Research, USMA, research related to the broad Product Appraisal Program of the Academy is under way. The Officer Prediction samples included most of the classes of 1958 and 1962. In addition to the experimental predictor batteries (DOL and DOB), special selector measures used for admission to West Point, the Graduate Record Examination given at the Academy, and the Aptitude for the Service Ratings from all four years at the Academy were provided. Data on correlation among the BESRL and the West Point predictors are available on a sample of 97 officers from the Class of 1962 who were located and evaluated in Vietnam in 1967-68 (Appendix Tables B-1 and B-2). The scholastic ability measures for USMA applicants and cadets correlate substantially with most of the DOB information measures, with some differentiation between verbal and mathematical content, while the Physical Aptitude Examination shows some negative relationships to the information measures. The DOB measures of personal characteristics appear to differentiate among such major factors of orientation and motivation as athletic, scientific-quantitative, and verbal-conceptual as do also the information measures. Table 8 presents validity coefficients (.20 or higher) of DOB and USMA variables with the Vietnam performance ratings. The DOB Information Scales most directly concerned with military knowledge--Warfare (Tactics) and Military Technology--combined with the final semester Aptitude for the Service Rating to yield a validity coefficient of .46. Adding History and Literature Information with negative weight (as a suppressor variable) and Entertainment Information and Outdoor Interest increased the validity to .58. This value is biased because the variables were selected for showing validity of .20 or higher. While the extent of bias is far less with unit-weighting than with optimum regression weights, it is likely that the same instruments would yield somewhat lower validity on a new sample. The results are nevertheless quite promising, in view of the fact that prediction of a field performance criterion over a span of five to six years is rarely achieved at this level of validity.

Table 8

VALIDITY OF DOB AND USMA VARIABLES IN PREDICTING PERFORMANCE OF USMA GRADUATES IN VIETNAM

Variable	Source	Validity Coefficient	Correlation of Sums[a]
Warfare (Information)	DOB	.31	.31
Aptitude for Service Rating	USMA	.29	.42
Military Technology (Information)	DOB	.29	.46
History and Literature (Information)	DOB	-.25	.51
Intellectual Entertainment (Information)	DOB	.25	.55
Outdoor (Interest)	DOB	.21	.58
English Composition	USMA	.24	[b]
Manual Crafts (Interest)	DOB	.21	[b]

[a] Validity of sum of successive variables, unit-weighted.
[b] Did not add to validity of composite.

PLANNED APPLICATION OF RESEARCH FINDINGS

Early in FY 70, it is expected that the "whole man" score for selection of OCS candidates will be put in use, employing the Officer Candidate Test and the Officer Qualification Inventory. Instruments for the revised procedures to select Distinguished Military Students will be provided in draft form midway in FY 70, for implementation by USCONARC in the 1970 ROTC advanced summer camp. In the meantime, as definitive findings become available from the longitudinal Officer Prediction research, consultations with DCSPER at the DA level and with CONARC and USMA will be initiated to work out application of the findings in the selection of cadets, RA commissioning, branch classification, and other pertinent aspects of the officer personnel system. Figure 1 suggests possible applications of the Differential Officer Battery to the cadet training programs.

From the analysis of the Officer Evaluation Center research and the Vietnam and other job performance criteria, it is anticipated that findings useful for improvement of the officer evaluation system may be made. A new Work Unit--OFFICER PERFORMANCE EVALUATION SYSTEMS--was introduced into the BESRL research program in FY 69. Research on the application of the relevant Officer Prediction findings will be made as a part of this new work unit.

SUMMARY

Initial findings from the comprehensive longitudinal Officer Prediction research indicate that the Differential Officer Battery (DOB) reliably measures many cognitive and personal factors potentially related to Army officer performance. Results from a sample of about 100 West Point

graduates of 1962 indicate promising validity of certain DOB measures, combined with such USMA variables as the Aptitude for the Service Rating, in predicting performance ratings in Vietnam in 1967-1968. Internal analysis of the situational tasks conducted at the Officer Evaluation Center in 1963-1965 provided evidence that the evaluation methods and instruments gave reliable and well differentiated performance scores. Complete analysis and interpretation of findings, with application to Army operations, is anticipated in FY 70.

APPENDIXES

Appendix A. Forms Used in Evaluation of Officer Performance in Vietnam (1967-1968)

B. Tables of Significant Correlations between BESRL and USMA Variables

PERFORMANCE EVALUATION FORM

OFFICER TO BE RATED: (Name, Service Number, Grade, Branch, etc.)

NOTE: Please correct any erroneous entry:

1. Please enter Rated Officer's Position Title: _____

2. Please provide the following data about yourself, if not already entered:

RATER OF ABOVE-NAMED OFFICER

Grade	Last Name	First Name	Init	Organization

Service Number	Duty Branch	Duty MOS	Position Title

Your Relationship to Rated Officer: ☐ Immediate Supervisor of Ratee ☐ Associate of Ratee ☐ Superior of Ratee Other Than Immediate Supervisor

NOTE: Information requested on this form is for research purposes only, and will not be made known locally or at any other Army echelon. It is not in any way a check on the utilization of personnel, and will not be used as the basis for any personnel action. It will be employed in a major personnel research study to identify and predict the requirements of successful officer performance in combat assignments as against technical and administrative assignments.

PART I: OVER-ALL PERFORMANCE RATING

3. Indicate very briefly the main duties performed by the rated officer in his assignment as signified by his Duty MOS and Position Title entered above:

_____

_____

_____

4. In all, about how many weeks has he served in the above assignment? _____

5. For about how many weeks have you observed him in this assignment? _____

6. Read carefully all seven scale step descriptions of Rating Scale I, "OVER-ALL Officer Performance Scale." Enter in box at right the number of the scale step which most accurately describes your judgment of the rated officer's over-all performance of his above duties (indicated in 3 above): ..... ☐

(OVER)

PART II: COMBAT PERFORMANCE RATING

7. Has this officer been in actual Vietnam combat of which you have knowledge?
☐ Yes ☐ No (If "No," proceed immediately to PART III, below.)

8. Indicate very briefly the type(s) of combat action(s) in which he engaged:

_____

_____

_____

9. His above combat action(s) occurred between _____ ____ and _____ ____.
Month Year Month Year

10. For about how many weeks was he in the combat action(s) indicated? _____

11. Your knowledge of his combat performance is based on (check one):
☐ Direct observation ☐ Other good evidence ☐ Doubtful evidence

12. Read carefully all seven scale step descriptions of Rating Scale II, "COMBAT Officer Performance Scale." Enter in box at right the number of the scale step which most accurately describes your judgment of the rated officer's combat performance: ..... ☐

PART III: COMMENTS

(This section is important for research analysis of qualitative aspects of officer performance.)

13. Has anything struck you as particularly noticeable about this officer's performance of duty (especially strong or weak points, or any extraordinary behavior or critical incident)? ☐ Yes ☐ No If "Yes," specify:

_____

_____

_____

_____

14. Other comments: _____

_____

_____

_____

_____

Signature: _____ Date: _____

RATING SCALE II: COMBAT

OFFICER PERFORMANCE SCALE

WHAT IS YOUR JUDGMENT OF THE RATED OFFICER'S PERFORMANCE IN VIETNAM COMBAT?

7	The VERY BEST TYPE OF COMBAT OFFICER PERFORMANCE--an inspiring example to all. I would stake my life on him, under enemy fire, to know what is to be done and to see that it is done, in any condition of battle. His combat performance is far above the requirements of his situation, suggesting the highest kind of formal recognition through meritorious award, decoration, or battlefield promotion. This type of officer is the ideal combat leader.
6	An EXTREMELY HIGH TYPE OF COMBAT OFFICER PERFORMANCE. He pulls a great deal more than his own weight as leader in battle. His combat performance is markedly above the requirements of his situation, suggesting formal recognition through off-schedule preparation of a special (favorable) efficiency report, or through letter of commendation or of appreciation.
5	VERY GOOD COMBAT OFFICER PERFORMANCE. He has more than enough of what it takes to be a successful leader in battle. His combat performance is somewhat above the requirements of his situation, suggesting informal recognition through specific favorable comment (for example, in his regular efficiency report), and through informal appreciation or commendation.
4	GOOD COMBAT OFFICER PERFORMANCE--the backbone of combat leadership. He has what it takes to be a successful leader in battle. His combat performance is fully up to the requirements of his situation, suggesting general appreciation (perhaps mostly unexpressed).
3	NOT-SO-GOOD COMBAT OFFICER PERFORMANCE. He doesn't quite have what it takes to be a leader in battle, without special help. His combat performance is somewhat below the requirements of his situation, though suggesting only the mildest kind of corrective action through informal recommendations for improvement provided by proper command control, or through change of duty assignment within the organization.
2	PRETTY POOR COMBAT OFFICER PERFORMANCE. He has very little of what it takes to be a leader in battle. His combat performance is markedly below the requirements of his situation, suggesting formal corrective action through off-schedule preparation of a special (unfavorable) efficiency report, through administrative admonition, letter of reprimand, or summary court, or through transfer out of the organization.
1	The WORST TYPE OF COMBAT OFFICER PERFORMANCE--a total threat to the mission. Either he doesn't know his job, or he can not or will not perform it under enemy fire. His combat performance is far below the requirements of his situation, suggesting the most drastic kind of formal corrective action through reclassification, demotion, general court, or boarding out of the Army.

RATING SCALE I: OVER-ALL

OFFICER PERFORMANCE SCALE

WHAT IS YOUR JUDGMENT OF THE RATED OFFICER'S OVER-ALL PERFORMANCE IN THIS DUTY ASSIGNMENT?

7	The VERY BEST TYPE OF OFFICER PERFORMANCE--an inspiring example to all. I trust him completely, in this assignment, to know what is to be done and to see that it is done, in any circumstance. His performance of this duty is far above the requirements of his situation, suggesting the highest kind of formal recognition through meritorious award, decoration, or accelerated advancement in grade. This type of officer is ideal for important duty in this kind of assignment.
6	An EXTREMELY HIGH TYPE OF OFFICER PERFORMANCE. He pulls a great deal more than his own weight in this assignment. His performance of this duty is markedly above the requirements of his situation, suggesting formal recognition through off-schedule preparation of a special (favorable) efficiency report, or through letter of commendation or of appreciation.
5	VERY GOOD OFFICER PERFORMANCE. He has more than enough of what it takes to succeed in this assignment. His performance of this duty is somewhat above the requirements of his situation, suggesting informal recognition through specific favorable comment (for example, in his regular efficiency report), and through informal appreciation or commendation.
4	GOOD OFFICER PERFORMANCE--the backbone of the officer corps. He has what it takes to succeed in this assignment. His performance of this duty is fully up to the requirements of his situation, suggesting general appreciation (perhaps mostly unexpressed).
3	NOT-SO-GOOD OFFICER PERFORMANCE. He doesn't quite have what it takes to succeed in this assignment, without special help. His performance of this duty is somewhat below the requirements of his situation, though suggesting only the mildest kind of corrective action through informal recommendations for improvement provided by proper supervision, or through change of duty assignment within the organization.
2	PRETTY POOR OFFICER PERFORMANCE. He has very little of what it takes to succeed in this assignment. His performance of this duty is markedly below the requirements of his situation, suggesting formal corrective action through off-schedule preparation of a special (unfavorable) efficiency report, through administrative admonition, letter of reprimand, or summary court, or through transfer out of the organization.
1	The WORST TYPE OF OFFICER PERFORMANCE--a total threat to the mission. Either he doesn't know his job, or he can not or will not perform it as required. His performance of this duty is far below the requirements of his situation, suggesting the most drastic kind of formal corrective action through reclassification, demotion, general court, or boarding out of the Army.

APPENDIX B

Table B-1

SIGNIFICANT CORRELATION COEFFICIENTS BETWEEN WEST POINT MEASURES AND INFORMATION SCALES OF THE DIFFERENTIAL OFFICER BATTERY[a]
(N = 97 USMA graduates, class of 1962, on active duty in Vietnam in 1967-1968)

	Correlation[b]								
	Graduate Record Exam			Scholastic Apt Test		Math	English	Phys Apt	
DOB Information	Soc Sci	Hum Sci	Nat Sci	Verbal	Math	Achiev	Comp	Exam	ASR
Practical Skills	41	43	53	28				-33	
Tech Opn	37	41	52	29				-29	
Math-Science	36	31	54	41	38	27	41		
History-Politics	61	60	52	59				-30	
Literature-Art	35	44	31	36					
Entertainment	51	62	39	48				-31	-28
Finance	56	46	48	39	39				
Intellectual Game					27				
Biochemistry	37	27	43	42	28				
Warfare	33		44	28	35				
Human Science	35	30	35						
Mil Technology	27	35	35	27	30		30		
Math-Science					28				
Supply	41	46	50	28	28			-35	
Intellectual		31	31		36	28		-27	
Financial Knowl			33		33	27			
Political Science	33	32	29	32					
Econ-Social	44	43	36	34					
Quantitative Misc					43				
Qualitative Misc			34	28	31	31			

[a] Statistically significant at .01 level of confidence.
[b] Decimal points omitted.

Table B-2

SIGNIFICANT CORRELATION COEFFICIENTS BETWEEN WEST POINT MEASURES AND MEASURES OF PERSONAL CHARACTERISTICS OF THE DIFFERENTIAL OFFICER BATTERY[a]
(N = 97 USMA graduates, class of 1962, on active duty in Vietnam in 1967-1968)

	Correlation[b]								
	Graduate Record Exam			Scholastic Apt Test		Math	English	Phys Apt	
DOB Scale	Soc Sci	Hum Sci	Nat Sci	Verbal	Math	Achiev	Comp	Exam	ASR
Admin						28			
Outdoor Interest						-35			
Aesth Interest				33					
Emotional Control						-37			
Sports	-31	-35						39	
Self-Assurance	31								
Scientific			41		33	30			
Athletic	-30	-35	-29				-27	54	37
Order	-30	-38		-34					
Free Fr Neur						-50	-27		
Active Supv	33		27						
Mil Intel				34					
Admin Supv								-28	
Combat Engr					29			-33	
Detail						37			
Free Fr Anom						-27			
Abstract Reason							28		
Mediation				-33					
Aesth-Intelect	35	41		38					
Mgt Drive								-27	
Cynicism							-30		
Educ Sophist	-31				-36		-41		

[a] Statistically significant at .01 level of confidence.
[b] Decimal points omitted.